

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/4714.P1/TCG/ WCVD/BG	Serial No. 09/678,266
COPY			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant Kori, et al.	Confirmation No.: 4642
(Use several sheets if necessary)		Filing Date October 3, 2000	Group Examiner
	Examiner D. Zameke		

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
<i>DD</i>	A1	6,372,598	04/16/02	Kang, et al.	438	399	06/16/99
<i>DD</i>	A2	6,369,430	04/09/02	Adetutu, et al.	257	382	04/02/01
	A3	6,368,954	04/09/02	Lopatin, et al.	438	627	07/28/00
	A4	6,358,829	03/19/02	Yoon, et al.	438	597	09/16/99
	A5	6,355,561	03/12/02	Sandhu, et al.	438	676	11/21/00
	A6	6,342,277	01/29/02	Sherman	427	562	04/14/99
	A7	6,333,260	12/25/01	Kwon, et al.	438	643	06/24/99
	A8	6,284,646	09/04/01	Leem	438	629	08/19/98
	A9	6,207,487	03/27/01	Kim, et al.	438	238	10/12/99
	A10	6,042,652	03/28/00	Hyun, et al.	118	719	09/07/99
<i>DD</i>	A11	5,306,666	04/26/94	Izumi	437	192	07/21/93
<i>DD</i>	A12	2003/0072975	04/17/03	Shero, et al.	428	704	09/26/02
	A13	2003/0049942	03/13/03	Haukka, et al.	438	778	08/22/02

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
<i>DD</i>	B1	01/29893	04/26/01	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
<i>DD</i>	B2	01/29891	04/26/01	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
<i>DD</i>	B3	2001-111000	04/20/01	JP	H01L	27/105	<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	
	C2	
	C3	
Examiner	<i>DD</i>	Date Considered <i>4/21/06</i>

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Applicant

Confirmation No.:

Kori, et al.

4642

(Use several sheets if necessary)

Filing Date

Group

Examiner D. Zarmeke

October 3, 2000

2827

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
<i>DP</i>	A1	6,534,395	03/18/03	Werkhoven, et al.	438	627	03/06/01
<i>DP</i>	A2	6,482,740	11/19/02	Soininen, et al.	438	686	05/15/01
	A3	6,482,733	11/19/02	Raaijmakers, et al.	438	633	04/26/01
	A4	6,482,262	11/19/02	Elers, et al.	117	84	10/13/00
	A5	6,475,910	11/05/02	Sneh	438	685	09/22/00
	A6	6,475,276	11/05/02	Elers, et al.	117	84	10/13/00
	A7	6,468,924	10/22/02	Lee, et al.	438	763	05/31/01
	A8	6,451,695	09/17/02	Sneh	438	685	12/22/00
	A9	6,447,933	09/10/02	Wang, et al.	428	635	04/30/01
	A10	6,423,619	07/23/02	Grant, et al.	438	589	11/30/01
<i>DP</i>	A11	6,420,189	07/16/02	Lopatin	438	2	04/27/01
<i>DP</i>	A12	6,399,491	06/04/02	Jeon, et al.	438	680	04/06/01
<i>DP</i>	A13	6,391,785	05/21/02	Satta, et al.	438	704	08/23/00

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
<i>DP</i>	B1	02/45167	06/06/02	WO	H01L	27/00	<input type="checkbox"/>	<input type="checkbox"/>
<i>DP</i>	B2	02/067319	08/29/02	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
<i>DP</i>	B3	01/66832	09/13/01	WO	C30B	25/14	<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
<i>DP</i>	C1	Klaus, et al. "Atomically Controlled Growth of Tungsten and Tungsten Nitride Using Sequential Surface Reactions," Applied Surface Science, 162-163 (2000) 479-491
	C2	
	C3	

Examiner *Deepti*Date Considered *10/10/02*

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U.S. Patent Documents

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<i>DL</i>	A1	2003/0032281	02/13/03	Werkhoven, et al.	438	640	09/23/02
<i>DL</i>	A2	2003/0031807	02/13/03	Elers, et al.	427	569	09/17/02
<i>DL</i>	A3	2003/0013320	12/05/02	Leskela, et al.	427	250	03/15/02
	A4	2002/0187631	12/12/02	Kim, et al.	438	637	12/05/01
	A5	2002/0187256	12/12/02	Elers, et al.	427	99	07/30/02
	A6	2002/0182320	01/16/03	Kim, et al.	438	778	05/31/01
	A7	2002/0162506	11/07/02	Sneh, et al.	118	715	06/28/02
	A8	2002/0155722	10/24/02	Satta, et al.	438	704	04/15/02
	A9	2002/0121697	09/05/02	Marsh	257	751	04/30/02
	A10	2002/0117399	08/29/02	Chen, et al.	205	125	02/23/01
<i>DL</i>	A11	2002/0109168	08/15/02	Kim, et al.	257	295	01/30/02
<i>DL</i>	A12	2002/0106846	08/08/02	Seutter, et al.	438	200	02/02/01
<i>DL</i>	A13	2002/0105088	08/08/02	Yang, et al.	257	774	10/31/01

Foreign Patent Documents

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<i>DL</i>	B1	1,167,569	01/02/02	EP	C23C	16/455	<input type="checkbox"/>	<input type="checkbox"/>
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	B3						<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

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Examiner	<i>DL</i>	Date Considered <i>10/30/02</i>

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	Examiner D. Zameke	October 3, 2000	Examiner	

U.S. Patent Documents

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<i>DC</i>	A1	2002/0094689	07/18/02	Park	438	694	03/07/02
<i>DC</i>	A2	2002/0090829	07/11/02	Sandhu, et al.	438	761	01/31/02
	A3	2002/0076837	06/20/02	Hujanen, et al.	438	3	11/28/01
	A4	2002/0076507	06/20/02	Chiang, et al.	427	569	10/24/01
	A5	2002/0061612	05/23/02	Sandhu, et al.	438	151	01/14/02
	A6	2002/0055235	05/09/02	Agarwal, et al.	438	430	10/29/01
	A7	2002/0052097	05/02/02	Park	438	507	05/03/01
	A8	2002/0048880	04/25/02	Lee	438	253	08/08/01
	A9	2002/0037630	03/28/02	Agarwal, et al.	438	430	10/29/01
	A10	2002/0031618	03/14/02	Sherman	427	569	10/09/01
<i>DC</i>	A11	2002/0019121	02/14/02	Pyo	438	618	06/20/01
<i>DC</i>	A12	2002/0007790	01/24/02	Park	118	715	05/03/01
<i>DC</i>	A13	2002/0004293	01/10/02	Soininen, et al.	438	584	05/15/01

Foreign Patent Documents

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Examiner	<i>DC</i>	Date Considered <i>10/15/01</i>

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U.S. Patent Documents

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<i>DP</i>	A1	2002/0000598	01/03/02	Kang, et al.	257	301	07/26/01
	A2	2001/0054769	12/27/01	Raaijmakers, et al.	257	758	04/26/01
	A3	2001/0054730	12/27/01	Kim, et al.	257	301	05/23/01
	A4	2001/0029094	10/11/01	Mee-Young, et al.	438	597	09/16/99
	A5	2001/0028924	10/11/01	Sherman	427	255.28	05/24/01
	A6	2001/0024387	09/27/01	Raaijmakers, et al.	365	200	02/22/01
	A7	2001/0009695	07/26/01	Saanila, et al.	427	255.39	01/18/01
	A8	2001/0002280	05/31/01	Sneh	427	255.28	12/22/00
	A9						
	A10						
	A11						
	A12						
	A13						

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
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	B2						<input type="checkbox"/>	<input type="checkbox"/>
	B3						<input type="checkbox"/>	<input type="checkbox"/>

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Substitute for form 1449A/PTO

SEP 20 2004

**SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT BY
APPLICANT**

(Use as many sheets as necessary)

Sheet

1

of

1

Application Number	09/678,266
Filing Date	October 3, 2000
First Named Inventor	Xi, et al.
Group Art Unit	2827
Examiner Name	David Zarneke
Attorney Docket Number	AMAT/4714.P1/TCG/WCVD/PJS

Submission Date

September 15, 2004

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
<i>DL</i>	A1	6,635,965	10/21/2003	Lee, et al.	
	A2				
	A3				
	A4				
	A5				<i>RECEIVED</i>
	A6				
	A7				<i>SEP 23 2004</i>
	A8				
	A9				<i>TECH. CENTER 2004</i>
	A10				
	A11				
	A12				
	A13				
	A14				
	A15				
	A16				
	A17				
	A18				

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
<i>DL</i>	C1	"Pulsed Nucleation for Ultra-High Aspect Ratio Tungsten Plugfill"; San-Hyeob Lee, et. al; Materials Research Society, 2002, 649-653.	
<i>DL</i>	C2	Yang, et al. "Atomic Layer Deposition of Tungsten Film from WF ₆ /B ₂ H ₆ : Nucleation Layer for Advanced Semiconductor Device," Conference Proceedings ULSI XVII (2002) Materials Research Society.	

Examiner

Date Considered

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.